## WHAT IS CLAIMED IS:

- 1. A method of reducing phytotoxicity to a plant caused by a herbicide application to the plant or the seed from which it grows which method comprises:
- 5 (a) applying to a plant locus a composition comprising a chloronicotinyl insecticide, and
  - (b) applying to the plant locus a herbicidal composition.
- The method according to Claim 1 wherein said plant is a crop plant.
  - 3. The method according to claim 2 wherein the crop plant is a monocotyledon plant.
- 15 4. The method according Claim 1 wherein the herbicide is applied to the soil at the locus.
  - 5. The method according to Claims 1 wherein the herbicidal composition is applied to the foliage of the plant at the locus.
  - 6. The method according to Claim 1 wherein the chloronicotinyl insecticide is a compound of formula (I):

$$R-N$$
 $(Z)$ 
 $X-E$ 

25 in which

20

R represents hydrogen, optionally substituted radicals from the group acyl, alkyl, aryl, aralkyl, heteroaryl or heteroarylalkyl;

- A represents a monofunctional group from the series hydrogen, acyl, alkyl, aryl, or represents a bifunctional group which is linked to the radical Z;
- E represents an electron-withdrawing radical;
- X represents the radicals -CH= or =N-, it being possible for the radical -CH= instead of an H-atom to be linked to the radical Z;
- Z represents a monofunctional group from the series alkyl, -O-R, -S-R,

$$-N$$

or represents a bifunctional group which is linked to the radical A or to the radical X (if X represents = C ).

10

- 7. The method according to Claim 1 wherein the chloronicotinyl insecticide composition is applied to the seed from which the plant grows.
- The method according to Claim 1 wherein the herbicide is applied as a pre-emergent treatment.
  - 9 The method according to Claim 1 wherein the herbicide is applied as a post emergent treatment
- 20 The method according to Claim 1 wherein the herbicide is selected from the group consisting of chloroacetamides; imidazolinones; oxyacetamides; sulfonylureas; triazines; triketones isoxazoles, and combinations thereof.
- The method according to Claim 2 wherein the crop plant is a maize or corn plant.
  - 12. The method according to claim 11 wherein the chloronicotinyl insecticide is applied to the seed of the corn plant.

13. The method according to claim 12 wherein the chloronicotinyl insecticide is applied at a rate of from 0.05 mg/seed to 3 mg/seed.

- 30 -

- 14. The method according to any one of Claims 1-3 wherein the soil temperature at the plant locus at or before the time of application of the herbicide is from about 4°C to about 25°C.
- 15. The method according to any one of Claims 1-3 wherein the soil temperature at the plant locus at or before the time of application of the herbicide is from about 10°C to about 20°C
  - 16. The method according to Claim 6 wherein the compound of formula (I) is:

$$CI \longrightarrow CH_2 - N \longrightarrow NH$$

$$NO_2$$

$$CI \longrightarrow CH_2 - N$$

$$NO_2$$

$$CH_3$$

$$CI \xrightarrow{N} CH_2 \xrightarrow{N} H \xrightarrow{N} CN$$

$$CI - CH_2 - N NH NH NCN$$

$$CI \xrightarrow{N} CH_2 - N \xrightarrow{NH} NH CI \xrightarrow{N} CH_2 - N \xrightarrow{N-NO_2} NHCH_3$$

$$CI \longrightarrow CH_2 - N \longrightarrow S$$
 $N \longrightarrow CN$ 

$$CI \xrightarrow{N} CH_2 - N \xrightarrow{S} CI \xrightarrow{N} CH_2 - N \xrightarrow{S} N - NO_2$$

$$CI \longrightarrow CH_2 - N \longrightarrow NH$$
 $CH$ 
 $NC$ 

$$CI \longrightarrow CH_2 - N \longrightarrow NH$$

$$CH \longrightarrow CH_2 - N \longrightarrow NH$$

$$CH \longrightarrow NO_2$$

$$CH \longrightarrow CH_2 - N \longrightarrow N(CH_3)_2$$

$$CH \longrightarrow NO_2$$

$$CH \longrightarrow NO_2$$

$$CI \longrightarrow CH_2 - N \longrightarrow N - H$$

$$N - NO_2$$

$$CI \longrightarrow S \longrightarrow CH_2 - N \longrightarrow N - H$$

$$N - NO_2$$

$$CI = \begin{bmatrix} S & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ &$$

$$CI \longrightarrow CH_2 - N \longrightarrow N - CH_3$$

$$N - NO_2$$

$$CI \longrightarrow N \longrightarrow CH_2 - N \longrightarrow N - CH_3$$

$$N - NO_2$$

$$CI \longrightarrow \begin{pmatrix} S & & & \\ & & & \\ N & & \\ N$$

5

$$CI \longrightarrow CH_{2} - N - C - CH_{3}$$

$$CH_{3}$$

$$CH_{2} - N - C - CH_{3}$$

$$CI \longrightarrow CH_{2} - N \longrightarrow CH_{2} - N \longrightarrow N - CH_{3}$$

$$N \longrightarrow NO_{2}$$

$$CI \xrightarrow{\begin{array}{c} C_2H_5 \\ \mid \\ N = \end{array}} CH_2 - N - C - NHCH_3 \qquad CI \xrightarrow{\begin{array}{c} CH_3 \\ \mid \\ N = \end{array}} CH_2 - N \xrightarrow{\begin{array}{c} CH_3 \\ \mid \\ N = \end{array}} N - CH_3$$

$$S \longrightarrow NH$$
 $CI \longrightarrow N \longrightarrow CH_2 - N \longrightarrow NH$ 
 $NO_2$ 

$$H_3C$$
  $S$   $N$   $NH$   $CI$   $CH_2$   $NH$   $CH$   $NO_2$ 

$$CI \stackrel{\mathsf{S}}{\longrightarrow} V \stackrel{\mathsf{CH}_2 - \mathsf{N}}{\longrightarrow} V \stackrel{\mathsf{N} + \mathsf{CH}_3}{\longrightarrow} V \stackrel{\mathsf{H}}{\longrightarrow} V \stackrel{\mathsf{H}$$

$$CI \longrightarrow S \longrightarrow CH_2 \longrightarrow N \longrightarrow CN$$

$$CI \longrightarrow CH_2 - N \longrightarrow S$$
 $CH_1 - NO_2$ 

$$CI \xrightarrow{CH_3} NHCH_3$$

$$N \xrightarrow{NO_2} NO_2$$

$$\begin{array}{c|c} CH_3 \\ CI & CH_2 \\ N & CH_3 \\ \end{array}$$

or

5

OI